

What is claimed is:

1. An insert molding die for a hollow component, comprising:
an upper die;
5 a lower die arranged under the upper die, wherein the upper die and the lower die forms a cavity which accommodates the hollow component and is charged with molten resin;
a plurality of upper-die pin members disposed on the upper die movably up and down;
10 upper-die urging means disposed on the upper die to urge the upper-die pin members downwardly so that the upper-die pin members project from the upper die by opening the upper die and the lower die and the upper-die pin members pressed into the upper die by closing the upper die and the lower die;
15 a plurality of lower-die pin members disposed on the lower die movably up and down so as to oppose the upper-die pin members respectively; and
lower-die urging means disposed on the lower die to urge the lower-die pin members upwardly so that the lower-die pin
20 members project from the lower die by opening the upper die and the lower die and the lower-die pin members pressed into the lower die by closing the upper die and the lower die.
2. The insert molding die of claim 1, wherein the upper-die
25 urging means and the lower-die urging means comprise springs respectively.
3. The insert molding die of claim 1, wherein the upper-die

urging means and the lower-die urging means comprise pneumatic cylinders respectively.

4. The insert molding die of claim 1, wherein the upper-die urging means and the lower-die urging means comprise hydraulic cylinders respectively.

5. The insert molding die of claim 1, wherein the upper die is provided with injection means adapted to inject molten resin into the cavity.

6. The insert molding die of claim 5, wherein the lower die is provided with another injection means adapted to inject molten resin into the cavity.

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7. An insert molding method for molding a hollow component, comprising the steps of:

preparing a molding die comprising an upper die and a lower die, at least either one of the upper die and the lower die being movable to and from the other die;

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separating the upper die from the lower die thereby opening the molding die;

arranging a hollow primary molded piece in the lower die while retaining the hollow primary molded piece apart from a concave bottom surface of the lower die;

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starting to inject molten resin into the molding die while retaining the hollow primary molded piece apart from the concave bottom surface of the lower die thereby filling up a space between

the hollow primary molded piece and the concave bottom surface with the molten resin before completely closing the molding die; and

continuing to inject the molten resin into the molding
5 die even after closing the molding die.

8. The injection molding method of claim 7, further comprising:

preparing upper-die pin members disposed on the upper
10 die movably up and down, upper-die urging means disposed on the upper die to urge the upper-die pin members downwardly, lower-die pin members disposed on the lower die movably up and down so as to oppose the upper-die pin members respectively, and lower-die urging means disposed on the lower die to urge
15 the lower-die pin members upwardly, and

setting the hollow primary molded piece on the lower-die pin members when arranging the hollow primary molded piece in the lower die.

20 9. The injection molding method of claim 7, wherein the molten resin is injected from the upper die in injecting the molten resin into the molding die.

10. The injection molding method of claim 9, wherein
25 the molten resin is further injected from the lower die in injecting the molten resin into the molding die.